

FAPEESP 203 US (10026221)**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for identifying an antimicrobial peptide which binds to an infective stage microorganism and damages said microorganism comprising
  - (a) contacting an infective stage microorganism with a plurality of non-identical peptides of claim 5,
  - (b) identifying peptides that bind to the microorganism, and
  - (c) assaying the peptides identified in (b) for capacity to damage the microorganism,wherein damage to said microorganism by a peptide of (c) indicates that the peptide of (c) is an antimicrobial peptide which binds to an infective stage microorganism and damages said microorganism.
2. (Previously presented) The method of claim 1, wherein the plurality of peptides is expressed on a bacteriophage.
3. (Previously presented) The method of claim 1, comprising contacting said microorganism with a library of synthetic peptides.
4. (Previously presented) The method of claim 1, wherein the microorganism is a protozoa, a fungus, a gram positive bacterium or a gram negative bacterium.
5. (Original) An isolated antimicrobial peptide consisting of from 10 to about 50 amino acids, wherein said peptide comprises 10 to about 12 contiguous amino acids of which 7 out of the 10 to about 12 amino acids are hydrophobic residues, 3 of the 10 to about 12 contiguous amino acids are basic residues and at least one of the 10 to about 12 amino acid is histidine (His), glutamic acid (Glu) or serine

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(Ser), with the proviso that two of the hydrophobic amino acids are adjacent tryptophans (Trp).

6. (Original) The isolated antimicrobial peptide of claim 5, comprising the amino acid sequence set forth in SEQ ID NO: 1 or a conservative variant of SEQ ID NO: 1.
7. (Original) The isolated antimicrobial peptide of claim 5, wherein said peptide is amidated, carboxymethylated or cyclized.
8. (Currently amended) ~~Analog~~ An analog of the peptides of ~~the~~ claim 5 having the same antimicrobial activity.
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)
16. (Canceled)
17. (Previously presented) A method for preventing growth, inhibiting growth or decreasing viability of a microorganism comprising contacting said microorganism with an effective amount of the polypeptide of claim 5; sufficient to prevent growth, to inhibit growth or to decrease viability of said microorganism.

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18. (Previously presented) The method of claim 17, wherein said microorganism is a protozoa or a fungus.
19. (Previously presented) The method of claim 17, wherein said microorganism is present in an environment that is capable of sustaining viability of the microorganism.
20. (Previously presented) The method of claim 19 wherein said environment is a water sample, a food product, a feed, an animal or a plant.
21. (Previously presented) The method of claim 18, wherein the protozoa is an Eimeria species, a Toxoplasma species, a Crithidia species, or a Trypanosoma species.
22. (Previously presented) The method of claim 18, wherein the fungus is selected from the group consisting of Candida albicans or Aspergillus nidulans, Colletotrichum gossypii, Alternaria macrospora, Bipolaris sorokiniana, Dreschlera tritici, Phoma sorghina, Microdochium oryzae, Bipolaris oryzae, Pyricularia grisea, Colletotrichum gloeosporioides, Rhizoctonia solani and Fusarium solani.
23. (Previously presented) The method of claim 18, wherein the protozoa is selected from the group consisting of E. acervulina or E. tenella.
24. (Previously presented) A method for treating an organism infected with a pathogenic microorganism comprising administering an effective amount of the isolated antimicrobial peptide of claim 5 to said organism sufficient to alleviate said infection.
25. (Previously presented) The method of claim 24, wherein said organism is a bird, a mammal or a plant.

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26. (Previously presented) The method of claim 24, wherein the pathogenic microorganism is a fungus or a protozoa.
27. (Previously presented) The method of claim 26, wherein the protozoa is an Eimeria or a Toxoplasma.
28. (Previously presented) The method of claim 26, wherein the fungus is selected from the group consisting of Candida albicans, Aspergillus nidulans, Colletotrichum gossypii, Alternaria macrospora, Bipolaris sorokiniana, Dreschlera tritici, Phoma sorghina, Microdochium oryzae, Bipolaris oryzae, Pyricularia grisea, Colletotrichum gloeosporioides, Rhizoctonia solani and Fusarium solani.
29. (Canceled)